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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,523	07/20/2000	Bruce E. Novich	1596C5	2899

7590

05/06/2003

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EXAMINER

GRAY, JILL M

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 05/06/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-16

**Office Action Summary**

Application No.

09/620,523

Applicant(s)

NOVICH ET AL.

Examiner

Jill M Gray

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6-11, 21-39 and 48-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 12-20 and 40-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14.                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The rejection of claims 1-3, 5, and 12-20 under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication No. 208,268, translation, is withdrawn in view of applicants' arguments.

The rejection of claims 40-47 under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication No. 5-110218, translation, is withdrawn in view of applicants' arguments.

### ***Claim Objections***

1. Claim 20 is objected to because of the following informalities: the preamble of this claim incorrectly refers to "a fabric" and should be "a reinforced laminate".  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 18, 40 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication No. 3-115,332 (hereinafter Kato) in view of Japanese Patent Publication No. 1-249333 (hereinafter Nagamine).

Kato teaches prepegs, laminates and electronic supports. The prepeg comprises a matrix material and a glass fabric base impregnated with a coating that is compatible with the matrix resin (page 2) but does not teach degreasing the glass fabric base.

Nagamine teaches a laminate adapted for an electronic support and an electronic support wherein the laminate comprises a glass cloth impregnated with a resin (page 1). In addition, Nagamine teaches that where the sizing agent causes a problem in the adhesion with the resin, the glass cloth is degreased (page 3), further teaching that sizing agents which do not required degreasing or surface treatment are known in the art which significantly improve the economic aspects of production (page 10). Clearly this teaching would have provided direction as well as a suggestion to the skilled artisan for non-degreased fabrics.

It would have been obvious to modify the teachings of Kato by using as the glass fabric base, a fabric that is non-degreased as taught by Nagamine, motivated by his teachings that such glass fabric cloths are known in the art and the desirability to improve productivity and production yield. As to claims 18 and 47, applicants have indicated on the record at page 6, that the LOI is a property of the coating. Kato teaches a coating that is compatible with the matrix material, which is essentially as required by applicants in claims 1 and 40. Accordingly, it is the examiner's position that this property is inherent. Therefore, when considered as a whole, the combined teachings of Kato and Nagamine would have rendered obvious the invention as claimed in claims 1, 18, 40 and 47.

4. Claims 2-3, 5, 12-17, 19-20, and 41-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, 3-115,332 in view of Nagamine 1-249333 as applied above to claims 1, 18, 40 and 47, further in view of Russian Patent Publication No. 2072121 (hereinafter Adolfovna).

Kato and Nagamine are as applied above but do not teach the incorporation of particles.

Adolfovna teaches substrates for circuit boards comprising fabric sheets impregnated with a polymer binder comprising a boron nitride powder (page 1), as required by claims 3, 5, 17, 41, 42, 43, and 46. In addition, Adolfovna teaches that the binder can be polyimide binder or epoxy binder and that the powder has a particle size of 0.5-20  $\mu$ m (page 1) as required by claims 15 and 44. Regarding the thermal conductivity and Moh's hardness of claims 12-13, Adolfovna teaches the same type of particles contemplated by applicants, accordingly, these properties are inherent because the same particles necessarily have the same properties. As to claims 19-20, Nagamine teaches the incorporation of resin reactive diluents in his coating composition. See page 17. Regarding claims 16 and 45, it would have been an obvious variant to include an additional lubricious material to minimize abrasion during processing. The substrates of Adolfovna have increased heat resistance and improved thermophysical and dielectric properties.

#### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-3, 5, 12-20 and 40-47 have been considered but are moot in view of the new ground(s) of rejection.

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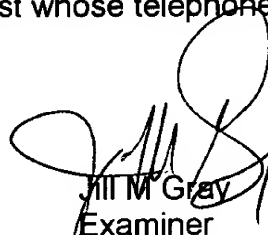
Applicants have not clearly identified that which they regard as their invention. The teachings of the prior art provide a clear suggestion for the usage of non-degreased fabrics in the formation of laminates and there is no clear evidence of record of unexpected or superior results/properties in the resultant laminate or electronic support wherein said results are directly related to the usage of a non-degreased fabric.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M Gray whose telephone number is 703.308.2381. The examiner can normally be reached on 10:00-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703.308.0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703.305.5408 for regular communications and 703.305.3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0651.

  
Jill M Gray  
Examiner  
Art Unit 1774

jmg  
May 5, 2003